Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Cancel claims 1-17.

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18. (New) A method for transmitting data between a cable modem (CM) and a cable modem termination system (CMTS), the method comprising:

receiving at the CM data packets to be transmitted to the CMTS, the data packets having different first and second properties;

concurrently storing at the CM a first set of parameters for transmission of data packets having the first property on a first carrier and a second set of parameters for transmission of data packets having the second property on a second carrier; and

transmitting either data packets having the first property over the first carrier using the first set of parameters or data packets having the second property over the second carrier using the second set of parameters.

19. (New) The method of claim 18, additionally comprising receiving assignments of the first and second carriers from the CMTS,

the sets of parameters from a CMTS responsive to a request from the CM.

20. (New) The method of claim 19, in which the first property comprises long data packets and the second property comprises short data packets.

21. (New) The method of claim 19, in which the first and second sets of parameters include different ranging data individual to the respective channels.

22. (New) The method of claim 19, in which the first and second sets of parameters additionally include different transmission signal levels individual to the respective channels.

23. (New) The method of claim 19, in which the first and second sets of parameters additionally include different equalization settings individual to the respective channels.

24. (New) The method of claim 20, alternately transmitting digital signals at a high symbol rate over the wide band channel and digital signals at a low symbol rate over the narrow band channel.

25. (New) The method of claim 24, additionally comprising transmitting the ranging data to the modem responsive to a request therefrom.

26. (New) The method of claim 25, in which the upstream transmission signal levels are stored individual to the respective channels.

27. (New) The method of claim 18, in which the long packets are transmitted in fragmented form over the narrow band channel when the traffic is higher on the wide band channel than the narrow band channel.

28. (New) The method of claim 18, in which the short packets are transmitted in concatenated form over the wide band channel when the traffic is higher on the narrow band channel than the wide band channel.

29. (New) The method of claim 18, in which carrier frequencies individual to the respective channels are stored.

30. (New) The method of claim 18, additionally comprising transmitting from the CMTS MAP information elements that define time slots

31. (New) A cable modem (CM) designed to operate with a cable modem termination system (CMTS), the cable modem comprising:

a subscriber terminal that creates long and short data packets for upstream transmission at the CM;

a memory that simultaneously stores at the CM wide-band ranging data for transmission over a wide band and narrow-band ranging data for transmission over a narrow band;

means for sensing the length of each data packet; and

a medium access controller responsive to the sensing means for transmitting the long packets to a CMTS over a wide band channel using the wide-band ranging data and the short packets to the CMTS over a narrow band channel using the narrow-band ranging data.

32. (New) A method for transmitting data between a cable modem (CM) and a cable modem termination system (CMTS), the method comprising:

transmitting from the CMTS time slot allocations for upstream data transmission;

receiving long and short data packets for upstream transmission at the CM;

concurrently storing at the CM wide-band ranging data for transmission on a first carrier having a wide band and narrow-band ranging data for transmission on a second carrier having a narrow band; and

transmitting either the long packets to the CMTS over the first carrier using the wide-band ranging data or the short packets to the CMTS over second carrier using the narrow-band ranging data.